

**Agency: Commerce, Community and Economic Development**

**Grants to Named Recipients (AS 37.05.316)**

**Grant Recipient: Kotzebue Broadcasting, Inc.**

**Project Title:**

# Kotzebue Broadcasting, Inc.- FM Translator Project

**State Funding Requested: \$ 32,000**  
One-Time Need

**House District: 40 - T**

**Brief Project Description:**

Expansion of FM translator system to the villages by updating and replacing outdated equipment. The upgrade will provide an AM signal to outlying villages.

**Funding Plan:**

<b>Total Cost of Project: \$82,000</b>						
	<u>Funding Secured</u>		<u>Other Pending Requests</u>		<u>Anticipated Future Need</u>	
	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>
State Funds	\$50,000	08				
Total	\$50,000					

**Detailed Project Description and Justification:**

KOTZ is located in Kotzebue and is the only radio station serving the Northwest Arctic Borough population of some 7,500 residents living in 11 villages. Local residents contribute to the operations of the station through fundraisers. However, this is not enough to maintain all of the equipment and fund the operations to run the radio station. The grant would provide for replacement of equipment that is outdated and in need of replacement. The original equipment was originally installed in 1986. The new equipment will provide an AM signal to outlying villages that currently can not receive an AM transmission. The outlying villages can not receive a usable transmission signal due to the increased electrical noise in the villags. The new equipment would overcome this problem. A part of this project was funded through the FY 08 supplemental which was moved into the FY 09 capital budget.

In rural Alaska, one of the primary duties of the radio station is to provide programming that addresses the health, safety, and educational needs of the community. KOTZ is used by all of the local public safety and weather organizations to disperse information regarding life, health, and safety issues. Such information includes search and rescue operations, storm information, travel conditions, and disease or rabies outbreaks. The radio station is a vital tool to get essential information to the hub and outlying communities in the timeliest manner.

**Project Timeline:**

Most of the money would be expended during the summer of 2008.

**Entity Responsible for the Ongoing Operation and Maintenance of this Project:**

KOTZ

*For use by Co-chair Staff Only:*

5:53 PM 4/29/2008



## KOTZ FM Translator Project 2007

In order for Kotzebue Broadcasting Inc. (KOTZ) to adequately serve our listeners in the Northwest Arctic Borough (NWAB) the expansion of our FM translator system in our villages is required.

Currently KOTZ uses 3 small FM transmitters (translators) in three of our villages (Ambler, Shungnak, Kobuk) to serve an area that it is difficult for residents to receive our AM signal. These villages are located to the east of Kotzebue at 125 to 150 miles out. These units were install in 1986 and have performed exceeding well through out the years. Has with all equipment, time and technology has caused them to reach the end of their useful life spans.

Since some of the responsibilities of KOTZ radio are to promote and provide programming that addresses the health, safety and educational needs of our listeners it is difficult to achieve this directive if our listeners can not receive a signal. KOTZ is also used by all of the local public safety organizations to disperse information regarding life and safety issues. Such information can consist of search and rescue operations, storm information, and travel conditions on our winter trails that are of the utmost importance to our listeners. Included in our public responsibilities is to be a primary originator or all EAS (Emergency Alert System) for the NW Arctic region.

The main technical reason for the difficulty in receiving a usable signal is the advent of more and more electrical noise in our villages. This has come about with the electrification of our villages and the increase in the use of more and more electrical home appliances and to some extent the use of snow machines and 4 wheelers. All these items generate electrical noise that is of course AM noise. Inclusive to this situation is the regional ground conductivity (very poor); varying soil types, vegetation, water, and climate induced yearly changes and just plain old distance.

Some may ask why KOTZ can't just increase its power output level. While it maybe possible to do this, the yearly power costs would be prohibitive. In order to double the signal level (i.e.: from 5mV to 10mv) we would have to increase the transmitter output by 4 times. In other words instead of running at our present level of 10,000 watts we would need to have a power output of 40,000 watts just in the carrier signal. Since we are an AM station (Amplitude Modulation) when we are feeding audio to our transmitter we basically double the power requirements. So in total we would require approximately 100,000 watts of power for such an upgrade. The power cost would be prohibitive and this is the reason we are requesting funds to implement the FM translator system for the North West Arctic Borough.

Pierre Lonewolf  
Chief Engineer  
KOTZ-AM  
Kotzebue, Alaska 99752

Equipment Name	Cost/Unit	# Units	Total
Crown FM150T Transmitter	\$ 5,795.00	10	\$57,950.00
Scala FMV FM Antenna	\$ 550.00	1	\$550.00
LMR400 Coax Cable	\$ 0.50	1000	\$500.00
LMR400 N Connectors	\$ 25.00	50	\$1,250.00
Sage Endec Receiver	\$2,800.00	2	\$5,600.00
NWS Receiver (EAS)	\$ 500.00	1	\$500.00
Video Receivers (EAS)	\$ 500.00	3	\$1,500.00
Misc Install Material	\$2,000.00	1	\$2,000.00
Climbing Harness	\$ 500.00	1	\$500.00
Shipping	\$2,500.00	1	\$2,500.00
Air Travel	\$5,000.00	1	\$5,000.00
lodging	\$ 100.00	10	\$1,000.00
Salary (weeks)	\$1,000.00	2	\$2,000.00
Per Diem	\$ 65.00	14	\$910.00
<b>Total Equipment</b>			<b>\$81,760.00</b>